

REMARKS**Rejections under 35 U.S.C. § 103(a)**

Claims 1 and 2¹ are improperly rejected as being unpatentable over Corral, in view of Weerackody and Feng et al.

The rejection is improper as each and every limitation is not found in the combination of references as relied upon by the Office.

The Office tacitly acknowledges that Corral does not append a data map signal to the modulated signal but attempts to obfuscate this deficiency by equating the data map signal to the side information. However, the side information is inserted, as shown in Figures 1 and 8, prior to the “modulation” in the Fourier processor 108.

Corral States:

The apparatus 100 also includes a side information inserter 106, coupled to the Fourier processor 108, arranged to insert side information descriptive of the reordering applied to the plurality of elements” Col. 9, ll. 59-63.

Therefore, even for arguments sake if the side information is equivalent to the data map signal, the side information is not appended to the modulated signal as required it the claim, at best the side information is appended to the non-modulated signal. The Office’s reliance on design choice amounts to nothing more than a superfluous conclusory statement, devoid of any reasoned factual or legal basis.

¹ The body of the rejection includes arguments regarding all of the pending claims.

In addition, the Office explicitly acknowledges that “Corral does not expressly disclose that the selection of the sequences is based on a comparison of a peak-to-average power ratio of the sequence to a predetermined threshold”. The Office improperly relies upon Weerackody to provide such a teaching.

The Office improperly states that Weerackody discloses “selecting a new data signal (step 407) and repeating the modulating measuring comparing steps until the PAPR does not exceed the threshold”. Weerackody discloses no such thing.

Weerackody differentially encodes data symbols relative to a previous encoded output so that the phase values on the encoding process are the same. In the disclosed process, Weerackody measures the PAPR of a modulated signal and compares the PAPR with a threshold. If the PAPR exceeds the threshold, a new phase sequence is selected to create a different data signal, and the PAPR is then measured for the new data signal (*see* Col. 4., lines 12-67).

Claim 1 requires *inter alia*:

“sequencing said data signal according to a data vector different from previous data vectors to thereby create a sequenced data signal different from previous sequenced data signals and repeating steps (b)-(e) until said power ratio does not exceed said predetermined threshold”.

It is the data signal that is re-sequenced.

In Weerackody it is the phase $\{\theta_{n,k}\}$ that is selected, not a new sequence of a data signal as required in the claims. Weerackody states:

If the test result in step 404 is YES, control is returned to step 402 and step 405 causes the current phase sequence $\{\theta_{n,k}\}$ to be selected ...If the test result is NO, ...step 407 causes a new phase sequence $\{\theta_{n,k}\}$ to be selected.” Col. 4, ll. 43-55.

Since in fact only the next phase is selected in Weerackody and not the data bit sequence no side information or data map is even required Weerackody explains:

“Thus it is seen that there is no need to explicitly transmit the phase information, i.e., phase values, as overhead with the transmitted symbols, and the PAPR is reduced in accordance with the invention” Col. 3, ll. 57-60

Therefore, as Weerackody does not provide for the selection of a new sequence of the data signal, it cannot provide the teaching relied upon by the Office. The rejection is improper and must be withdrawn.

Regarding Claims 3 and 8, as noted above, the Office acknowledges that Corral does not disclose that the selection of the sequences is based on a comparison of a peak-to-average power ratio, and the Office relies upon Weerackody to provide the teaching. Weerackody selects a phase and not sequences based on PAPR. Therefore, the rejection of Claims 3 and 8 is likewise improper.

Regarding Claim 6 and similarly Claim 11, the Office’s rejection fails as claim 6 requires sequencing data to be transmitted based upon a resultant comparison of the peak-to-average power ratio (PAPR) of the modulated sequence to a first threshold value, and Weerackody as relied upon by the Office only teaches selection of a phase, not a

sequence, based on a comparison of PAPR with a threshold and thus sequencing data is not based on a PAPR comparison. Thus the rejection is improper.

The Addition of Feng et al does not obviate the deficiencies of Corral and Weerackody as described above.

Likewise the rejection of the dependent claims is also improper irrespective of the additional patentable features recited therein.

Conclusion

Based on the above explanation, Applicant believes that the present application is in condition for allowance and, as such, it is earnestly requested that Claims 1-13 be allowed to issue in a U.S. Patent.

If the Examiner believes that an in-person or telephonic interview with the Applicant's representatives will expedite the prosecution of the subject patent application, the Examiner is invited to contact the undersigned agents of record.

The Office is requested and hereby authorized to charge the appropriate extension-of-time fees against **Deposit Account No. 08-0870**.

Respectfully submitted,

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